

Application No. 10/593,308
Reply to Office Action of

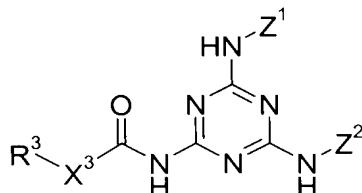
SUPPORT FOR THE AMENDMENTS

Newly-added Claims 11-20 are supported by the specification and the original claims.
No new matter is believed to have been added to the present application by the amendments submitted above.

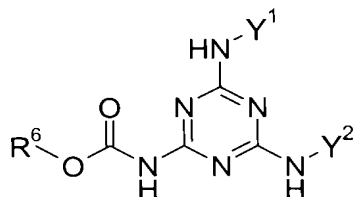
REMARKS

Claims 11-20 are pending. Favorable reconsideration is respectfully requested.

The present invention relates to a process for preparing a 1,3,5-triazine carbamate of formula (I):



from a 1,3,5-triazine carbamate of formula (II):



wherein

either Y^1 and Z^1 are both hydrogen or Y^1 is a group of formula $-(\text{CO})-\text{O}-\text{R}^4$ and Z^1 is a group of formula $-(\text{CO})-\text{X}^1-\text{R}^1$,

either Y^2 and Z^2 are both hydrogen or Y^2 is a group of formula $-(\text{CO})-\text{O}-\text{R}^5$ and Z^2 is a group of formula $-(\text{CO})-\text{X}^2-\text{R}^2$,

R^1 , R^2 , R^3 , R^4 , R^5 and R^6 each independently of one another are the radical of an alcohol or amine and

X^1 , X^2 and X^3 each independently of one another are oxygen or NH,

comprising

reacting the 1,3,5-triazine carbamate of formula (II) at a temperature of 40 to 120°C with an alcohol of the formula R^3-OH and/or an amine of the formula R^3-NH_2 and, optionally, with an alcohol of the formula R^2-OH , an amine of the formula R^2-NH_2 , an alcohol of the formula R^1-OH and/or an amine of the formula R^1-NH_2 ,

in the presence of at least one catalyst selected from the group consisting of tin compounds, cesium salts, alkali metal (hydrogen)carbonates and tertiary amines.

See Claim 11.

The rejection of the claims under 35 U.S.C. §103(a) over Flood (EP 624,577) is respectfully traversed. Flood fails to suggest the claimed process.

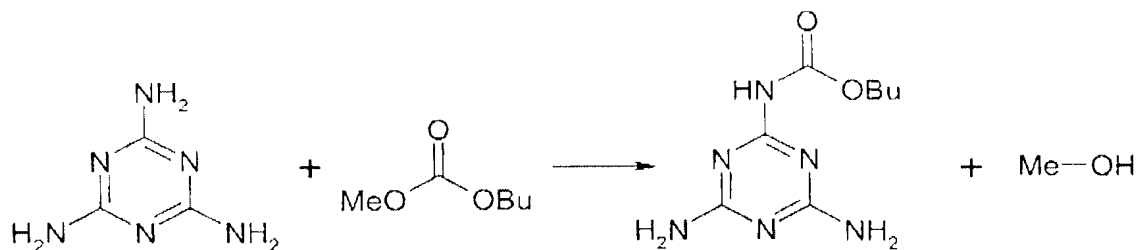
Flood is limited to the preparation of “an organic carbonate in situ for reaction with an amino-1,3,5-triazine” (see col. 9, lines 47-56 and col. 10, lines 23-35 and col. 10, line 25).

Hence, what Flood discloses is the preparation of mixed carbonates or an exchange of the alcohol compound of the carbonates in an equilibrium reaction:



(Me: methyl, bu: butyl), which can be shifted to the product side, e.g., by distilling off methanol or by using large amounts of butanol.

The mixed methyl-butyl-carbonate thus obtained reacts with an amino-1,3,5-triazine one or several times:



In other words: Flood discloses reaction conditions for the equilibrium reaction of the carbonate which reacts in a separate step with the amino-1,3,5-triazine to form a urethane. The disclosure of Flood, col. 9, line 43 to col. 10, line 35 is restricted to carbonates, and does not pertain to the formation of urethanes, which is the product of the claimed process.

Thus, according to the present invention, a urethane of Formula (II) is reacted with a compound $R^3\text{-XH}$ (and if appropriate $R^1\text{-XH}$ and $R^2\text{-XH}$) to produce a compound of Formula (I), which is also a urethane, when X^3 is oxygen, or which is an urea when X^3 is unsubstituted nitrogen (NH).

Hence, the reaction according to the invention is a transurethanisation or the reaction from an urethane to an urea and is, therefore, different from the reaction disclosed by Flood, in which one carbonate is transformed into another carbonate.

Since Flood discloses a different reactions there is no motivation for a person skilled in the art to take into account that disclosure for the different reaction according to the invention. Even if the person skilled in the art should take the disclosure of Flood into account, there is no reasonable expectation of success, because the reactivity of the carbonates according to Flood are different from that of urethanes or ureas.

In view of the foregoing, withdrawal of this ground of rejection is respectfully requested.

The rejection of the claims under 35 U.S.C. §112, second paragraph, is believed to be obviated by the amendment submitted above. In view of those amendments, the claims are believed to be definite within the meaning of 35 U.S.C. §112, second paragraph. Accordingly, withdrawal of this ground of rejection is respectfully requested.

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Applicants submit that the present application is in condition for allowance. Early notice to this effect is earnestly solicited.

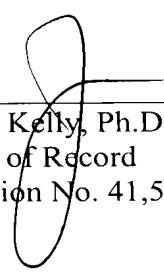
Respectfully submitted,

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